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February 4, 2000

The Honorable Richard Meserve
Chairman
Nuclear Regulatory Commission
Washington, DC 20555

Dear Chairman Meserve:

I am again writing to request information about the status of the new security program to replace the Operational Safeguards Response Evaluations and Regional Assists (OSRE) program. As you may know, I have addressed this topic in several letters to former Acting-Chair Dicus dated July 8, 1999 and former Chairman Jackson dated February 23, 1999. The focus of this letter is on the specific elements of the rulemaking plan "Option 3" described in SECY-99-241 and in the Staff Requirements Memorandum of November 22, 1999. This option requires a comprehensive review of 10 CFR 73.55, which describes requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage, resulting in the publication of a final rule within 3 years.

In addition, the Nuclear Energy Institute (NEI) is developing a pilot program to transition NRC licensees from the implementation of the OSRE program to the new rule. In addition, data on the effectiveness of the pilot program gathered during the rulemaking process will influence the final rule. The pilot program is scheduled to begin at the end of the current OSRE cycle in May 2000. A member of my staff attended public meetings held by the NRC on December 2, 1999 and December 21, 1999 at which elements of the pilot program and the rulemaking plan were discussed. The discussions at those meetings raised concerns about the direction the rulemaking and pilot program might take. Since the pilot program will most likely provide the model for the security program adopted in the final rule, it is crucial to resolve these issues before the program is firmly established.

As I have indicated in my previous correspondence, I am encouraged by the NRC's initiative to comprehensively review 10 CFR 73.55. Although the current measures used to implement that rule, the OSRE program, successfully identified weaknesses in the security plans at more than 26 facilities, there are several deficiencies in the program. The OSRE exercises only tested each facility once in an eight-year period. This time between exercises is too long. In addition, the mock terrorist force did not utilize the full range of threats described in the Design Basis Threat (DBT) in 10 CFR 73.1. The force excluded crucial elements such as the use of an active insider and the use of a truck bomb.

The strengths of the OSRE program were, nonetheless, notable. Expert contractors familiar with modern combat techniques monitored the progress of the force-on-force exercises. In addition, the evaluating criteria stringently required the licensee's security force to protect against damage to the reactor core. Because of the strong base elements, weaknesses were identified at many plants and security was improved.

The failure of the licensees during these previous exercises demonstrates, however, the continued need for a strong performance-based counter-terrorism evaluation program. The new pilot program and rulemaking should be aimed at correcting the weaknesses of the OSRE program and retaining its strengths. Based on the preliminary description of the NEI pilot program in the Working Draft (WD) and White Paper entitled "A Fundamental Element of the Security Cornerstone is Prevention of a Part 100 Release" provided to my staff at the December 2, 1999 meeting, this does not, however, appear to be the case. In fact, the pilot program appears to weaken the definition of radiological sabotage used in the OSRE program, deny sufficient NRC involvement in the force-on-force exercises and make no indication that the elements of the full DBT will be utilized.

The definition of radiological sabotage is one of the most important elements of the security program, since it determines the criteria for success or failure during the evaluated exercises and drills. Using a definition based on 10 CFR 100 releases is, however, inappropriate for evaluating such a program. The purpose of 10 CFR 100 relevant to plant operations is given in 10 CFR 100.1(c):

> "(c) Siting factors and criteria are important in assuring that radiological doses from normal operation and postulated accidents will be acceptably low, that natural phenomena and potential man-made hazards will be appropriately accounted for in the design of the plant, that site characteristics are such that adequate security measures to protect the plant can be developed, and that physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans are identified."

This passage indicates that part 100 release criteria are used to determine a location that would provide minimal radiological exposure in the event of an accident. In this sense, the criteria should be viewed as a maximum release standard in the event of an uncontrollable situation such as an earthquake or operator mistake that leads to core damage.

The nature of a performance-based counter-terrorism program is, however, very different. The evaluated exercises and drills used in the program should test whether the security team can defend key targets at the plant. Using part 100 release criteria would undermine this objective for two important reasons. First, a licensee could "pass" an exercise without successfully defending the plant. This would occur if the simulated core damage from a mock assault resulted in a radiological release that the licensee assumes would be contained by other safety mechanisms. Viewed against part 100 standards, this scenario would be judged a successful

defense of the facility, since the radiological release beyond the plant would be contained. From the security perspective, however, this exercise would indicate a serious problem with the security force, since the team would have allowed the terrorist force to gain considerable access to key target areas such as the reactor core. If the part 100 criteria were used, it is unlikely the security methods would be improved, defeating the goal of the training program. In fact, it is unlikely any security force would ever "fail" an exercise.

The second problem with part 100 release criteria involves the assumed operator actions used to mitigate core damage which could be caused by the mock terrorist force. These actions were designed for different scenarios such as an earthquake or operator error. I am concerned that the security protocol may not consider the differences in procedure a terrorist attack would require. For example, an operator may be unable to act if an armed terrorist were in the room. Unless these operator responses are incorporated into the performance-based exercises, they should not be used to credit the potential damage a mock terrorist force might cause to the reactor core.

Part 100 criteria do play a role in the overall safety program. In the event that an intruder succeeded in causing core damage, the part 100 limits ensure that the exposure to the surrounding community would be minimized, but the basis for evaluating the training exercise should be a clearly defined action related to defense of the key targets within the plant. Standards based on part 100 release limits do not satisfy this basic requirement.

Another potential problem with the pilot program involves the lack of a precise oversight role for NRC experts. According to the WD, "The Nuclear Regulatory Commission may observe all evaluated drills and will be invited to observe the evaluated exercise." Simply observing the exercise and drills does not incorporate the three NRC headquarters personnel and contractors sufficiently to ensure the exercises are conducted with realistic terrorist forces and credible responses. As David Orrik, Security Specialist in the Office of Nuclear Reactor Regulation, indicated in his Differing Professional View (DPV) of August 7, 1998, "The contractors, who assist both NRC and DOE, are exceptionally well qualified and trained for this program's efforts." The NRC contractors have specialized training that takes year to achieve. It is unlikely that licensees have the necessary experience to properly evaluate and conduct the exercise. Without this expertise, the program, most likely, will fail to achieve the same success as the OSRE program.

Finally, the pilot program should take full advantage of the various elements of the terrorist threat described in the DBT. Although it is impossible to prepare for every conceivable scenario, the exercise should at least utilize the full range of attacking force provided in the DBT. The OSRE program clearly identified the discrepancy between a plant's commitment to a security plan and its ability to implement that plan in a force-on-force exercise (*See* Orrik's DPV). As a minimum, the exercise should utilize the full range of adversarial characteristics described in the DBT. As evidenced by the OSRE program, this is the most efficient method to ensure the licensees will be able to protect against a wide range of domestic terrorist threats.

If the pilot program were enacted without addressing these conditions, I believe the program would not be an improvement but rather a step backward from the successful OSRE program.

To address the issues I have articulated in this letter and to better understand the NRC's views on the issues they raise, I request your assistance in responding to the following questions:

1. Since the definition of radiological sabotage is crucial to the successful implementation of a new security program, when will the NRC release a draft for the radiological sabotage plan?

2. Is the NRC considering a 10 CFR 100 release criterion for radiological sabotage? What other definitions are being considered? What other federal agencies or departments have provided expertise on the appropriate definition for radiological sabotage?

3. As indicated in SECY-99-241, any delay in initiating the pilot program would allow for continuation of the OSRE program until the pilot program is in place. What steps is the NRC taking to ensure that there will be no break in security training exercise between the last scheduled OSRE and the start of the pilot program? Does the NRC have contingency plans for a new round of OSREs beginning in June 2000?

4. Many executive branch departments and agencies such as FEMA, the FBI and the Defense Department have expertise in dealing with domestic terrorism. Their expertise would most likely be useful in many facets of the reactor safeguards program. In particular, these agencies could provide insight to define a realistic DBT. What role do other agencies such as the FBI or FEMA play in defining the DBT? What role does the Department of Defense have in developing the training programs and other elements of the new NEI pilot program?

5. Since the nature of the domestic terrorist threat may change as response strategies adapt, updating the threat is crucial to providing the best possible defense. How often will the DBT be updated to reflect the latest intelligence information regarding likely terrorist acts?

6. In a November 11, 1998 correspondence to former Chairman Jackson, I inquired about recent threats of terrorism. The NRC response indicated a low-level widespread threat within the last few months. Have there been more threats since that date? If so, does the frequency and/or level of the threat over the last 5 years appear to be increasing or decreasing?

7. Despite the ambiguous language in the December 2 NEI Working Draft on the pilot program, what role will the NRC contractors and experts play in the evaluated exercises of the NEI pilot program?

8. The ability to correct problems is crucial to success of the pilot program; however, the program as described in the December 2 Working Draft from NEI omits references to corrective actions and sanctions for failure to successfully complete the exercises and drills. How will the NRC ensure compliance of the licensees with changes indicated by the evaluated exercises?

At a time when the threat of domestic terrorism is increasing, the NRC seems to be missing an opportunity to improve the security program at the nation's commercial nuclear power plants. The NRC has an opportunity with the new rulemaking and NEI pilot program to develop a strong security training program to counter potential terrorist threats. This program can improve on the weaknesses of the OSRE program (the long delay between repeat exercises and the lack of full use of the design basis threat characteristics), but should maintain its strengths (the expertise of the NRC contractors, realistic mock force-on-force drills and a strong definition of radiological sabotage). I encourage the NRC to consider these efforts to ensure a strong program.

Thank you again for your assistance and cooperation in this matter. I request that a response to this inquiry be provided within 15 working days, or no later than February 29, 2000. Should you or your staff have any questions about this inquiry, please contact Mr. Gregory Jaczko or Mr. Jeffrey Duncan of my staff at 202-225-2836.

Sincerely,

Edward J. Markey

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